



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,168	12/13/2001	Michael D. James	GB 000182	3955
24737	7590	02/23/2006	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			POWERS, WILLIAM S	
			ART UNIT	PAPER NUMBER
			2134	
DATE MAILED: 02/23/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,168

Applicant(s)

JAMES, MICHAEL D.

Examiner

William S. Powers

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 8-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 8/24/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Drawings

In light of Applicant's amendment to the specification, the objections to figure 4 & 5 are withdrawn.

Claim Objections

In light of Applicant's amendment to claim 9, the claim objection is withdrawn.

Claim Rejections - 35 USC § 112

In light of Applicant's amendment to claim 18, the 35 USC 112, 2nd paragraph rejection is withdrawn.

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Response to Arguments

2. Applicant's arguments, see page 10, lines 7-13, filed 12/22/2005, with respect to the rejection(s) of claim(s) 9 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of U.S. Patent No. 5,237,610 to Gammie et al. that teaches the demultiplexing of the decoding data from the program data in a digital television network.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 8, 13, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,886,732 to Humpleman in view of US Patent No. 6,038,625 to Ogino, further in view of US Patent No. 6,826,699 to Sun.

As to claim 1, Humpleman teaches:

a. **A distributed digital television system comprising: a plurality of discrete television sets** (column 3, lines 1-13).

- b. **Decoding digital television signals for display at the (respective) television sets** (column 7, lines 29-48).
- c. **A plurality of respective distributed signal decoding arrangements having respective cryptographic engines configured for executing conditional access** (a distributed system with a conditional access programming subsystem that incorporates encryption/decryption for authentication and authorization (user password, credit card numbers, etc.) (column 9, lines 43-49 and column 10, lines 52-61)).

Humpleman does not expressly mention direct communication between televisions.

However, in an analogous art Ogino teaches **a system being configured for transferring, over a network linking the plural sets and from a source from among said arrangements to a destination from among said arrangements** (a peer-to-peer network that comprises smart televisions that have the ability to transmit data with each other over an IEEE 1394 serial communications bus in order “to control one another and obtain information regarding one another” (Ogino, column 2, lines 55-57) and enhance the coordination of audio/visual devices that are interconnected and share resources (Ogino, column 2, lines 59-65)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the digital television network of Humpleman with the intercommunication between devices of Ogino in order “to control one another and obtain information regarding one another” (Ogino, column 2, lines 55-

57) and enhance the coordination of audio/visual devices that are interconnected and share resources as suggested by Ogino (Ogino, column 2, lines 59-65).

Neither Humpleman nor Ogino specifically teach a security protocol for transmission of data including authentication data and encryption key exchange within the local network. However, in an analogous art Sun teaches **a decryption key usable for conditional access by the respective cryptographic engine of the destination arrangement** (the use of 5C Digital Transmission Content Protocol authentication and key exchange, 5C DTCP AKE (Sun, column 6, lines 45-50) in order to “provide a means for protecting the owner’s property rights” (Sun, column 1, lines 29-30) as suggested by Sun.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the peer-to-peer digital television network Humpleman and Ogino with the added network security features of Sun in order to “provide a means for protecting the owner’s property rights” (Sun, column 1, lines 29-30) as suggested by Sun.

As to claim 2, Humpleman teaches that a **network comprises a television signal distribution network for delivering digital television signals to the television sets** (a network that distributes digital television signals to television sets) (column 3, lines 62-67).

As to claim 3, Humpleman teaches **a network includes filters** (column 8, lines 60-64) **and radio frequency feeder cables mutually arranged to selectively route keys transferred in said transferring and said signals** (a network that uses hybrid coaxial cables as a transmission medium (column 6, lines 53-60). Humpleman further teaches that the cables can transmit analog television signals, which are within the RF spectrum (Humpleman, column 3, lines 3-7)).

As to claim 4, Sun teaches **performing said transferring under a separate cryptographic layer of security** (using of 5C Digital Transmission Content Protocol authentication and key exchange, 5C DTCP AKE (Sun, column 6, lines 45-50)).

As to claim 5, Humpleman teaches **each television set includes an arrangement of said distributed signal decoding arrangements** (column 7, lines 39-43).

As to claim 8, Humpleman teaches:

a. **A digital signal decoding arrangement for receiving coded digital television signals** (a digital television (column 3, lines 1-13) with decoding arrangement (column 7, lines 29-48)).

b. **A conditional access module configured for the input and output of decryption keys serving to control the decoding of the digital television signal** (a distributed system with a conditional access programming subsystem that incorporates

encryption/decryption for authentication and authorization (user password, credit card numbers, etc.) (column 9, lines 43-49 and column 10, lines 52-61)).

Humpleman does not expressly mention direct communication between televisions. However, in an analogous art Ogino teaches using the decryption keys **either locally within the apparatus by means of said input or remotely at further digital television, apparatus by means of said output** (a peer-to-peer network that comprises smart televisions that have the ability to transmit data with each other over an IEEE 1394 serial communications bus in order “to control one another and obtain information regarding one another” (Ogino, column 2, lines 55-57) and enhance the coordination of audio/visual devices that are interconnected and share resources as suggested by Ogino (Ogino, column 2, lines 59-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the digital television network of Humpleman with the intercommunication between devices of Ogino to enhance the coordination of audio/visual devices that are interconnected and share resources as suggested by Ogino (Ogino, column 2, lines 59-65).

Neither Humpleman nor Ogino specifically teach a security protocol for transmission of data including authentication data and **decryption keys** within the local network. However, in an analogous art Sun teaches the use of 5C Digital Transmission Content Protocol **authentication and key exchange**, 5C DTCP AKE (Sun, column 6,

lines 45-50) in order to “provide a means for protecting the owner’s property rights” (Sun, column 1, lines 29-30) as suggested by Sun.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the peer-to-peer digital television network Humpleman and Ogino with the added network security features of Sun in order to “provide a means for protecting the owner’s property rights” (Sun, column 1, lines 29-30) as suggested by Sun.

As to claim 13, Humpleman teaches **said plurality [of television sets] includes at least three sets, said system being further configured for said transferring from any one to any other** (a network with “any number” of television sets (column 10, lines 28-36) and Ogino teaches a peer-to-peer communication network (Ogino, column 6, lines 15-30)).

As to claim 14, Humpleman teaches **said transferring restricts display at said source, of specific broadcasted content whose display transferring authorizes at said destination** (the use of restricted access television programming at an individual apparatus (column 10, lines 41-61)).

As to claim 15, Humpleman teaches **said plurality includes at least three sets, said system being further configured for said transferring from any one to any**

other (a network with “any number” of television sets (column 10, lines 28-36) and Ogino teaches a peer-to-peer communication network (Ogino, column 6, lines 15-30)).

As to claim 17, Humpleman teaches **that inputting locally authorizes display, at the apparatus, of specific broadcasted content, said inputting serving to input a decryption key outputted from said further apparatus, the outputting restricting display of said content at said further apparatus** (the use of restricted access television programming at an individual apparatus chosen by the user (column 10, lines 41-61)).

As to claim 18, Humpleman teaches **a television system including both the local, and further, digital television apparatus** (a network with “any number” of television sets (column 10, lines 28-36)).

As to claim 19, Humpleman teaches **that inputting locally authorizes display, at the apparatus, of specific broadcasted content, said inputting serving to input a decryption key outputted from said further apparatus, the outputting restricting display of said content at said further apparatus** (the use of restricted access television programming at an individual apparatus chosen by the user (column 10, lines 41-61)).

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,886,732 to Humpleman in view of U.S. Patent No. 5,237,610 to Gammie et al. (hereinafter Gammie).

As to claim 9, Humpleman teaches:

- a. **A digital signal decoding arrangement for receiving coded digital television signals** (a digital network with digital televisions that decode digital signals (column 7, lines 29-48).
- b. **Means for the input and output of decoding authorization data serving to control the decoding of the digital television signal either locally within the apparatus or remotely at further digital television apparatus** (the ability to view restricted access programming on a digital television of user's choosing by transmitting data over said network (column 10, lines 52-61)).
- c. **Demultiplexing means** (the ability to demultiplex the incoming signal into its component parts at the set top electronics for each television (column 7, lines 34-43). Humpleman does not expressly mention splitting the decoding authorization data from a received digital television signal. However, in an analogous art Gammie teaches **demultiplexing means for splitting decoding authorization data from a received digital television signal** (the demultiplexing decoding data from the program data with a demultiplexer (column 12, lines 20-30) in order to protect programming from pirates (column 3, lines 11-23) as suggested by Gammie).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the digital television network of Humpleman with the demultiplexing of the incoming signal into programming and decoding parts of Gammie in order to protect programming from pirates (column 3, lines 11-23) as suggested by Gammie.

5. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,886,732 to Humpleman in view of US Patent No. 6,038,625 to Ogino, further in view of US Patent No. 6,826,699 to Sun as applied to claim 1 above, and further in view of US Patent Application No. 2001/0030959 to Ozawa et al. (hereinafter Ozawa).

As to claim 11, Humpleman teaches a network interface module that decrypts incoming transmissions and handles access control (Humpleman, column 7, lines 49-59) and Ogino teaches a peer-to-peer network that comprises smart televisions that have the ability to transmit data with each other over an IEEE 1394 serial communications bus in order "to control one another and obtain information regarding one another" (Ogino, column 2, lines 55-57). Humpleman and Ogino do not expressly mention the use of a smart card. However, in an analogous art Ozawa teaches **transferring of the decryption key transfers from a smart card of said source arrangement to a smart card of said destination arrangement** (the use of a smart card in a set top box in order to "provide the key for decoding incoming cryptographic

data for content that the CAM [smart card] determines the user is authorized to receive" (Ozawa, page 3, paragraph 31) as suggested by Ozawa).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to implement the invention of Humpleman, Ogino and Sun with the smart card of Ozawa in order to "provide the key for decoding incoming cryptographic data for content that the CAM [smart card] determines the user is authorized to receive" (Ozawa, page 3, paragraph 31) as suggested by Ozawa.

As to claim 12, Humpleman teaches **communicating with a radio frequency local area network established between ones of said sets** (Humpleman, column 3, lines 3-7)

6. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,886,732 to Humpleman in view of US Patent No. 6,038,625 to Ogino, further in view of US Patent No. 6,826,699 to Sun, as applied to claim 8 above, in still further view of U.S. Patent No. 5,237,610 to Gammie et al. (hereinafter Gammie).

As to claim 16, Humpleman, Ogino nor Sun expressly mentions splitting the decoding authorization data from a received digital television signal. However, in an analogous art Gammie teaches **a cryptographic engine, and further including both a demultiplexer for splitting decoding authorization data from a received digital television signal to yield a remaining signal and a second demultiplexer for**

dividing said remaining signal into separate signals for inputting into said cryptographic engine (demultiplexing decoding data from the program data with a demultiplexer (column 12, lines 20-30) in order to protect programming from pirates (column 3, lines 11-23) as suggested by Gammie).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the digital television network of Humpleman with the demultiplexing of the incoming signal into programming and decoding parts of Gammie in order to protect programming from pirates (column 3, lines 11-23) as suggested by Gammie.

7. Claims 10 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,886,732 to Humpleman in view of US Patent No. 6,038,625 to Ogino.

As to claim 10, Humpleman teaches:

- a. **A digital television system comprising a plurality of discrete television sets** (column 10, lines 28-36).
- b. **Decoding incoming television signals locally at each television set** (column 7, lines 29-48).
- c. **Decryption key from a conditional access module of a digital decoding arrangement associated with one television set** (a distributed system with conditional access of programming subsystem that incorporates

encryption/decryption for authentication and authorization (user password, credit card numbers, etc.) (column 9, lines 43-49 and column 10, lines 52-61)).

Humpleman does not expressly mention direct communication between televisions.

However, in an analogous art Ogino teaches **distributing comprises transferring a decryption key from a conditional access module of a digital decoding arrangement associated with one television set for operation in association with a conditional access module of a digital decoding arrangement associated with another television set** (a peer-to-peer network that comprises smart televisions that have the ability to transmit data with each other over an IEEE 1394 serial communications bus in order “to control one another and obtain information regarding one another” (Ogino, column 2, lines 55-57) and enhance the coordination of audio/visual devices that are interconnected and share resources (Ogino, column 2, lines 59-65) as suggested by Ogino).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the invention of Humpleman with the communications between devices of Ogino in order “to control one another and obtain information regarding one another” (Ogino, column 2, lines 55-57) and enhance the coordination of audio/visual devices that are interconnected and share resources (Ogino, column 2, lines 59-65) as suggested by Ogino.

As to claim 22, Humpleman teaches said **plurality includes at least three sets, said system being further configured for said transferring from any one to any**

other (a network with “any number” of television sets (column 10, lines 28-36) and Ogino teaches a peer-to-peer communication network (Ogino, column 6, lines 15-30)).

8. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,886,732 to Humpleman in view of US Patent No. 6,038,625 to Ogino, as applied to claim 10 above, in further view of US Patent Application No. 2001/0030959 to Ozawa et al. (hereinafter Ozawa).

As to claim 20, neither Humpleman nor Ogino expressly mention the use of a smart card. However, in an analogous art Ozawa teaches **transferring of the decryption key transfers from a smart card of said source arrangement to a smart card of said destination arrangement** (the use of a smart card in a set top box in order to “provide the key for decoding incoming cryptographic data for content that the CAM [smart card] determines the user is authorized to receive” (Ozawa, page 3, paragraph 31) as suggested by Ozawa).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to implement the invention of Humpleman, Ogino and Sun with the smart card of Ozawa in order to “provide the key for decoding incoming cryptographic data for content that the CAM [smart card] determines the user is authorized to receive” (Ozawa, page 3, paragraph 31) as suggested by Ozawa.

As to claim 21, Humpleman teaches communicating with a radio frequency local area network established between ones of said sets (Humpleman, column 3, lines 3-7)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William S. Powers whose telephone number is 751 272 8573. The examiner can normally be reached on m-f 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 571 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)


WSP

February 13, 2006

